

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2004/050110

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: D21G 9/00, D21F 7/00, B65H 20/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: D21G, D21F, B65H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages -	Relevant to claim No.
X	US 5738760 A (SVANQVIST ET AL), 14 April 1998 (14.04.1998), column 6, line 28 - line 59, figures 2-3, abstract	1-2,9,12,13
Y	column 6, line 28 - line 59, figures 2-3, abstract	3-8,10,11, 14,15
	--	
X	US 4881327 A (HAUSER ET AL), 21 November 1989 (21.11.1989), column 5, line 7 - line 30, figure 2, claim 1, abstract	1-3
Y	column 5, line 7 - line 30, claims 4-15, abstract	3-8,10,11, 14,15
	--	

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"B" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

26 October 2004

Date of mailing of the international search report

28-10-2004

Name and mailing address of the ISA/

Swedish Patent Office

Box 5055, S-102 42 STOCKHOLM

Facsimile No. +46 8 666 02 86

Authorized officer

NILS NORDIN/BS

Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI 2004/050110

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5370289 A (HELMS), 6 December 1994 (06.12.1994), column 2, line 60 - column 3, line 26, figures 2-3, claim 1, abstract --	1-3
X	US 5970627 A (STENZ ET AL), 26 October 1999 (26.10.1999), column 6, line 10 - line 29, figure 6, claim 1, abstract --	1-2
A	US 6558514 B2 (ROUHIAINEN ET AL), 6 May 2003 (06.05.2003), column 11, line 58 - column 13, line 7, figures 11-14, abstract --	1-15
A	US 5891309 A (PAGE ET AL), 6 April 1999 (06.04.1999), column 5, line 13 - line 23, claims 1-2, abstract -- -----	1-15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/FI 2004/050110

US	5738760	A	14/04/1998	AT	201910	T	15/06/2001
				CA	2229275	A,C	20/03/1997
				DE	69613231	D,T	08/11/2001
				EP	0850335	A,B	01/07/1998
				SE	0850335	T3	
				ES	2157457	T	16/08/2001
				JP	10512336	T	24/11/1998
				KR	273870	B	15/12/2000
				PT	850335	T	30/11/2001
				SE	504708	C	07/04/1997
				SE	9503174	A	14/03/1997
				WO	9710382	A	20/03/1997

US	4881327	A	21/11/1989	AT	272588	A	15/12/1990
				AT	392991	B	25/07/1991
				BR	8900978	A	24/10/1989
				DE	3807857	A,C	28/09/1989
				FI	83553	B,C	15/04/1991
				FI	885542	A	11/09/1989
				JP	1239186	A	25/09/1989
				SE	466505	B,C	24/02/1992
				SE	8804262	A	25/11/1988

US	5370289	A	06/12/1994	NONE			

US	5970627	A	26/10/1999	CA	2313218	A	17/06/1999
				DE	69817018	D,T	09/06/2004
				EP	1037841	A,B	27/09/2000
				JP	2001525305	T	11/12/2001
				WO	9929603	A	17/06/1999

US	6558514	B2	06/05/2003	US	20020092637	A	18/07/2002
				WO	02068753	A,B	06/09/2002

US	5891309	A	06/04/1999	CA	2245453	A,C	26/02/1999
				DE	69813434	D,T	25/03/2004
				EP	0905312	A,B	31/03/1999
				SE	0905312	T3	
				ES	2197444	T	01/01/2004
				JP	3094216	B	03/10/2000
				JP	11124785	A	11/05/1999